



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,072	01/08/2004	M. George George	200315243-US	5433

22879 7590 03/23/2006

HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER

CAO, DIEM K

ART UNIT PAPER NUMBER

2194

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p align="center">10/753,072</p>	<p>Applicant(s)</p> <p align="center">GEORGE, M. GEORGE</p>	
	<p>Examiner</p> <p align="center">Diem K. Cao</p>	<p>Art Unit</p> <p align="center">2194</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-16, 18-21, 23-38 and 40-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-16, 18-21, 23-38 and 40-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**WILLIAM THOMSON**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**

**Attachment(s)**

- |  |   |
|--|---|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/> Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/> Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|--|---|

### DETAILED ACTION

1. Claims 2-16, 18-21, 23-38 and 40-45 are pending. Applicant has amended claims 2-6, 12, 14-16, 18-21, 23-27, 30, 31, 34, 35, 38, 40, 41, canceled claims 1, 17, 22, 39 and added claims 44-45.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 2-7, 10-15, 19-21, 23-38 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saboff (U.S. 6,154,878) in view of Takimoto (U.S. 2001/0052034 A1).**

4. As to claim 2, Saboff teaches creating an interface module (col. 5, lines 12-24), creating a plurality of proxy functions within the interface module corresponding to a plurality of functions within the implementation module (col. 5, lines 12-24), when the implementation module is to be replaced (col. 14, lines 34-53 and col. 16, lines 43-45), the interface module blocking entry by the system into the implementation module (col. 14, lines 34-53), wherein the system uses the functions within the implementation module by calling the proxy functions (col. 6, lines 43-66) and some of the global variables of the implementation module are stored within the interface module (col. 6, lines 38-40), and wherein no state information of the implementation module is

stored within the implementation module (the interface library ... contains global data associated with the implementation library, this obviates the need for the application to relocate the data after an update of the implementation library, col. 6, lines 38-40).

5. However, Saboff does not teach tracking entries into and exits out of the implementation module by the system, and when the number of entries corresponds to the number of exits, replacing the implementation module. Takimoto teaches tracking entries into and exits out of the implementation module by the system, and when the number of entries corresponds to the number of exits, replacing the implementation module (page 9, paragraphs 123-125).

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Saboff and Takimoto because the Takimoto teaches a method for updating a program component loaded in a server in an N-tier client-server environment, whereby a program can be dynamically and efficiently loaded into a server can be dynamically and efficiently replaced, without service interruption.

7. As to claim 3, Saboff teaches the interface module blocks entry by the system into the implementation module only when it is safe to do so (col. 14, lines 34-53).

8. As to claim 4, Saboff teaches the system is an operating system (col. 2, lines 41-45).

9. As to claim 5, Saboff teaches the system is an application (col. 2, lines 41-45).

10. As to claim 6, Saboff does not teach the interface module performs the tracking step. Takimoto teaches the distributed call control unit performs the tracking step (page 9, paragraph 125).
11. As to claim 7, Takimoto teaches the tracking is performed using a reference counter (page 9, paragraph 125).
12. As to claim 10, Saboff teaches the interface module is statically linked to the application (col. 4, lines 60-61).
13. As to claim 11, Saboff teaches the interface module is dynamically linked to the application (col. 4, lines 60-61).
14. As to claim 12, Saboff teaches the system includes a plurality of threads and at least some of the threads use the implementation module (col. 14, lines 41-44).
15. As to claim 13, Saboff teaches some of the state information of the implementation module is stored on a heap (see Fig. 5 and associated text).
16. As to claim 14, Saboff teaches the implementation module is replaced with an updated version (col. 1, lines 13-16).

17. As to claim 15, Saboff teaches the implementation module is replaced with a corrected version (col. 1, lines 13-16).

18. As to claim 20, see rejection of claims 1 and 3 above.

19. As to claim 19, Saboff teaches moving some global variables from the implementation module to another module (the interface library ... contains global data associated with the implementation library, this obviates the need for the application to relocate the data after an update of the implementation library, col. 6, lines 38-40).

20. As to claim 44, Saboff teaches step (iii) comprises moving all global variables which hold the state information of the implementation module from the implementation module to the interface module without leaving any of the global variables within the implementation module (the interface library ... contains global data associated with the implementation library, this obviates the need for the application to relocate the data after an update of the implementation library, col. 6, lines 38-40).

21. As to claim 21, see rejection of claim 3 above.

22. As to claim 23, see rejection of claim 1 above. Saboff further teaches a memory, a processor (inherent being in a computer system, a program is executed) arranged for relaying

Art Unit: 2194

calls to use an implementation function to a corresponding proxy function (col. 5, lines 41-52), and no global variables that hold state information of the implementation module are stored within the implementation module both prior to and after the replacing (the interface library ... contains global data associated with the implementation library, this obviates the need for the application to relocate the data after an update of the implementation library, col. 6, lines 38-40).

23. As to claim 24, see rejection of claim 1 above.

24. As to claim 25, see rejection of claims 20 and 44 above.

25. As to system claim 26, it is the same as the method claim of claim 1 and is rejected under the same ground of rejection.

26. As to system claim 27, it is the same as the method claim of claim 17 and is rejected under the same ground of rejection.

27. As to system claim 28, it is the same as the method claim of claim 24 and is rejected under the same ground of rejection.

28. As to system claim 29, it is the same as the method claim of claim 25 and is rejected under the same ground of rejection.

Art Unit: 2194

29. As to claim 30, see rejection of claim 1 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

30. As to claim 31, see rejection of claim 17 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

31. As to claim 32, see rejection of claim 24 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

32. As to claim 33, see rejection of claim 25 above. Saboff further teaches a memory (inherent from Fig. 5 and associated text).

33. As to claim 34, see rejection of claim 1 above. Saboff further teaches a storage media (inherent from the system is a computer).

34. As to claim 35, see rejection of claim 17 above. Saboff further teaches a storage media (inherent from the system is a computer).

35. As to claim 36, see rejection of claim 24 above. Saboff further teaches a storage media (inherent from the system is a computer).

36. As to claim 37, see rejection of claim 25 above. Saboff further teaches a storage media



Art Unit: 2194

(inherent from the system is a computer).

37. As to claim 38, Saboff teaches a binary file including an interface module and a replaceable implementation module created according to the method of claim 17 (inherent from being a file that being executed by a computer, wherein the computer process binary code only).

38. As to claim 40, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 1 (col. 4, line 56 - col. 5, line 10).

39. As to claim 41, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 17 (col. 4, line 56 - col. 5, line 10).

40. As to claim 42, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 24 (col. 4, line 56 - col. 5, line 10).

41. As to claim 43, Saboff teaches supplying a computer with a program for causing the computer to perform the method of claim 25 (col. 4, line 56 - col. 5, line 10).

**42. Claims 16, 18 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saboff (U.S. 6,154,878) in view of Takimoto (U.S. 2001/0052034 A1) further in view of Hicks (Dynamic Software Updating).**

Art Unit: 2194

43. As to claim 16, Saboff teaches each proxy function has the calling name of the corresponding function (col. 5, lines 12-24). However, Saboff does not explicitly teach the corresponding function is renamed. Hicks teaches the corresponding function is renamed (page 15, section 3.2.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Saboff, Takimoto and Hicks because renaming functions provides more freedom in timing updates, since the program is aware of both versions (page 16, left column, second paragraph)

44. As to claim 18, see rejection of claim 16 above.

45. As to claim 45, Saboff teaches no global variables that hold the state information of the implementation module are stored within both the implementation module and the replaceable implementation module (the interface library ... contains global data associated with the implementation library, this obviates the need for the application to relocate the data after an update of the implementation library, col. 6, lines 38-40).

**46. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saboff (U.S. 6,154,878) in view of Takimoto (U.S. 2001/0052034 A1) further in view of Nakajima (U.S. 6,289,510 B1).**

47. As to claim 8, Saboff does not teach tracking is performed using reference flags. Nakajima teaches tracking is performed using reference flag (abstract). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Saboff, Takimoto and Nakajima because it provides an alternative method to perform the tracking step.

48. As to claim 9, Saboff does not teach the tracking is performed using reference counts and reference flags. See rejections of claims 7 and 8 above.

### *Response to Arguments*

49. Applicant's arguments filed 1/5/2006 have been fully considered but they are not persuasive.

In the remarks, applicant argued in substance that Saboff' does not teach "no state information of the implementation module is stored within the implementation module" (and similar language). Applicant reasoned that even though the Saboff global data/variables are contained in the interface library does not necessarily mean that such global data/variables are not stored within the implementation library, and in the specification of the instant application, the state information permitted to be kept in the implementation library.

Examiner respectfully traverses applicant's arguments:

Saboff teaches global data/variable are contained in the interface library, and this will obviate the need for the application to relocate the data after an update of the implementation library (col. 6, lines 38-44). Nowhere in this passage, Saboff teaches the data/variable may be stored within the implementation library, and one ordinary skill in the art would against such implementation because it is redundant, and take more memory in the system, thus, degrade the

performance of the system. Further more, the specification disclosed the state information permitted to be kept in the implementation library, it is not necessary means the data/variable is kept in the implementation library. Permitted to be kept is not the same as has to be kept. Thus, the arguments are not persuasive and the rejection is maintained.

### ***Conclusion***

50. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K. Cao whose telephone number is (571) 272-3760. The examiner can normally be reached on Monday - Friday, 5:30AM - 2:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Diem Cao

  
**WILLIAM THOMSON**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100